Remarks

Claims 1 to 16 are cancelled and claims 17 to 28 are added. Claims 17 to 28 are pending in this application of which claims 17, 20, 23 and 26 are in independent form.

Claims 2 to 4 and 10 to 12 were objected to because claims 2 and 10 were grammatically incorrect. Added claim 18 corresponds to claim 2 and added claim 24 corresponds to claim 10 and both claims 18 and 24 are written as suggested by the Examiner so that they should now no longer be grammatically incorrect.

Independent claims 1, 9 and 13 were rejected under 35 USC 103(a) as being unpatentable over Johnson et al. Added claim 17 incorporates the subject matter of original claims 1 and 4. Also, independent claim 23 incorporates the subject matter of original claims 9 and 12 and claim 26 incorporates the subject matter of original claims 13 and 14. The following will now show that independent claims 17, 23 and 26 patentably distinguish the invention over this reference.

In the action, reference is made to column 2, lines 13 to 57 of Johnson et al. However, from these passages there is no suggestion as to a gradient method. Instead, in accordance with the method described in Johnson et al, the light source is first displaced along an axis until the maximum of the light intensity is reached and, thereafter, in the same way, the light source is moved in the two directions perpendicular to

this last axis until the maximum is reached in each case. Thereafter, a displacement along the first axis again takes place until the maximum of light intensity is reached. However, applicant respectfully submits that this is no gradient method but rather an iterative method. In order to express the difference between the gradient method and the iterative method with greater clarity in added claims 17 and 23. Claim 17, for example, now incorporates the features and limitations of:

> "beginning from a start position and determining the maximum gradient of the light power in dependence upon the position change of said lamp unit relative to said illumination beam path; and,
>
> displacing said lamp unit in a direction of the maximum gradient of light power until the light power detected by said detector is a maximum."

There is no suggestion whatsoever in Johnson et al which could possibly lead our person exercising only ordinary skill to arrive at the above features and limitations. Accordingly, applicant submits that claim 17 patentably distinguishes his invention over Johnson et al.

Claim 23 also includes the above features and limitations so that this claim too should now be allowable.

With respect to independent claim 26, applicant notes that this claim now includes the features and limitations of:

> "a partially transmitting mirror mounted in said illumination beam path upstream of said specimen table;
>
> a detector mounted in a beam path deflected by said partially transmitting

mirror downstream of said pupil plane for detecting the light power in said illumination beam path;"

The above features and limitations are nowhere disclosed in Johnson et al. In this reference, the detector 32 instead first detects the light after it has been reflected from the specimen. This has the disadvantage that the light intensity, which is detected by the detector 32, always is dependent upon the reflection characteristics of the specimen and this is avoided with the above-quoted features of added claim 26.

For the above reasons, applicant submits that independent claim 26 also patentably distinguishes the applicant's invention over Johnson et al.

Claim 20 incorporates the subject matter of original claims 5 and 6. Claim 6 was rejected under 35 USC 103(a) as being unpatentable over Johnson et al in view of Nishi. The following will show that added claim 20 patentably distinguishes the invention over this combination of references.

With respect to this combination of references, applicant respectfully submits that the sensor 58 in Nishi performs a completely different function than does the sensor 32 in Johnson et al. The sensor 32 in Johnson et al functions to provide an areal integral detection of the light power in the viewing beam path. Areal integration here means that the light power is detected by the detector integrated over the entire viewing field. However, the detector 58 of Nishi is completely unsuitable for such a measuring task, namely, a surface integral detection of the light power. The detector 58 of

Nishi has a narrow slit-shaped diaphragm 57 and a further small aperture diaphragm 76. In Nishi, the detector 58 does not function to provide an areal integral detection; rather, this detector functions to provide a local resolved detection of the light power, namely, a higher spatial resolution perpendicular to the scanning direction of the exposure process. With the measurement with the sensor 58 through the slit-shaped diaphragm 57, it is intended to be ensured that the illuminating intensity can be held constant in the longitudinal direction of the exposing slit. This can be seen especially from column 21, line 49, to column 22, line 25, of Nishi. With such a detector of high resolution in a direction, the required areal measurement which is needed in Johnson et al cannot be realized except if the detector slit would be time sequentially drawn over the entire image field and the instantaneous light power would be integrated over time. Then, however, the measurement of the light intensity wanted in Johnson et al during the inspection process would no longer be possible.

For the reasons advanced above, it is not seen how a person of ordinary skill could combine the subject matter of Johnson et al and Nishi to arrive at the applicant's invention as it is now more carefully defined in added claim 20. Accordingly, claim 20 should now likewise patentably distinguish the invention over the combination of Johnson et al and Nishi and be allowable.

The remaining claims are all dependent from one of the independent claims so that they too should now be allowable.

Reconsideration of the application is respectfully requested.

Respectfully submitted,

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